

REMARKS

Claims 1-53 are pending. Claim 47 has been amended without change in scope, changing "portions" to "portion," to render moot an issue of indefiniteness. Claims 19 and 32 have been amended without changed in scope to remove inadvertently repeated words. Claim 26 has also been amended without change in scope to correct a grammatical error. Claim 45 has been amended without intended change in scope to add two words that were inadvertently omitted.

Allowable Subject Matter

The indication that claims 15-25 are allowed, and that claims 2-14, 29-31, and 33-36 constitute allowable subject matter, is noted with appreciation.

Information Disclosure Statement

An information disclosure statement is submitted herewith, citing additional references.

Indefiniteness Rejection

Claim 47 stands rejected under 35 USC 112, second paragraph, as indefinite. As noted above, claim 47 has been amended to change "portions" to "portion," rendering moot the rejection.

Prior Art Rejections

Claims 1, 6, 26-28, 32, 37-46, and 48-53 stand rejected under 35 USC 102(e) as anticipated by Endo et al., US 2004/0075616 A1 ("Endo"). Withdrawal of the rejections is respectfully requested for at least the following reasons.

Endo discloses an RFID tag 12 that has an IC chip 13 and an antenna 14. The RFID tag 12 is mounted on an article 11. The antenna 14 includes a pair of portions on

opposite surfaces of the article 11: a flat plate conductive member 14a on a back side of the article 11, and a spiral coil body 14b on a front side of the article 11. Paragraph [0023]. Endo discloses that the resistance of the conductive material for the flat plate and the spiral coil may be selected by selecting the material and thickness of the conductive members. Paragraph [0008]. Endo does not disclose placing different effective resistance regions in the same antenna layout.

Claim 1 recites a method of configuring an RFID device that includes identifying a low-current-flow portion of an antenna layout proposed for the antenna structure, and placing a high effective resistance region in the low-current-flow portion, and low effective resistance regions in other portions of the antenna layout. Endo does not teach or suggest identifying a low-current-flow portion of a proposed antenna layout. The portions of Endo cited in the Action do not appear to relate to identification of low-current-flow portions of a proposed antenna layout. It is believed that other portions of Endo do not teach or suggest this feature, either. Since Endo does not teach or suggest a recited feature of claim 1, claims 1 and 6 are patentable over Endo.

In addition, Endo does not teach or suggest using different effective resistance regions in the same antenna layout. Paragraph [0008] of Endo only discloses that the resistance of the conductive material for the flat plate and the spiral coil may be selected by selecting the material and thickness of the conductive members. It does not disclose using different resistances in different parts of Endo's antenna 14. It is believed that other parts of Endo do not teach or suggest use of different resistance in different portions of an antenna structure, either. Thus for another reason claims 1 and 6 are patentable over Endo.

Claim 26 recites an RFID device that includes, *inter alia*, an antenna structure on a substrate wherein the antenna structure includes one or more antenna elements having a regular shape, and wherein the antenna structure includes a low effective resistance region, and a high effective resistance region having an electrical

conductivity less than that of the low effective resistance. The present application explicitly defines regular shapes as “traditional antenna shapes utilized for coupling to an RFID chip or strap, to facilitate communication between the chip and a receiver or detector, for example.” Paragraph [0046]. Two interpretations are possible regarding Endo’s structure, neither of which corresponds to the recited features of claim 26. First, one could view the coil antenna itself an antenna structure with a regular shape. However, so interpreted Endo fails to teach or suggest the recited different effective resistance regions. As noted above in the previous paragraph, Endo does not teach or suggest use of different-resistance conductive materials in the same antenna structure. Thus under the first interpretation, Endo does not teach or suggest the features of claim 26.

Alternatively, the conductive portions of Endo’s spiral antenna may be considered as corresponding to a low effective resistance region, and the spaces between the spiral antenna conductive portions may be seen as a high effective resistance region. But so interpreted Endo’s antenna structure does not have the recited regular shape. The shape of Endo’s overall structure under this interpretation becomes a circular or an annulus (Figs. 1 and 3), or a rectangle (Fig.7), connected to two terminals of the IC chip 13. This is not a “regular shape,” as defined in the present application and as used in claim 26. Thus again Endo fails to teach or suggest all of the recited features of claim 26. Since under either interpretation Endo fails to teach or suggest the features of claim 26, claims 26-28, 32, 37, and 38 are patentable over Endo.

In addition, dependent claim 32 is patentable over Endo for the additional reason that Endo does not teach or suggest using different thicknesses of conductive material in the same antenna structure.

Claim 39 recites a method of configuring an RFID device antenna structure layout, wherein the method includes selecting an initial antenna structure layout that

includes a conductive element with a regular shape; and changing the effective resistance of a portion of the conductive element. Endo does not teach or suggest starting changing effective resistance of a portion of a conductive element that has a regular shape. As discussed above with regard to claim 26, Endo does not teach or suggest an antenna structure with a regular shape and with different resistance in different portions. Since Endo does not teach or suggest all of the recited features of claim 39, claims 39-44 are patentable over Endo.

It is believed that Endo also does not teach or suggest the features recited in dependent claims 41, 43, and 44.

Claim 45 recites a method of reducing costs of RFID devices that includes selecting an initial structure layout, and modifying a portion of a conductive element of the initial layout to produce a modified antenna structure layout having a reduced cost. Since Endo does not teach or suggest modifying an initial layout, claims 45-53 are patentable over Endo.

In addition, it is believed that many of the dependent claims 46-53 recited additional features not taught or suggested by Endo. For example, Endo does not appear to disclose anything regarding simulating performance of an initial antenna structure layout, as is recited in claim 52.

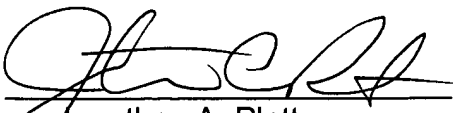
Conclusion

For at least the foregoing reasons, withdrawal of the rejections of the claims is respectfully requested, in which event this application would be in condition for allowance. Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

No fee is believed due with the filing of this Reply. In the event any fees are due in connection with the filing of this paper, the Commissioner is authorized to charge

those fees to Deposit Account No. 18-0988 (Charge No. AVERP3415US).

Respectfully submitted,
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